REMARKS

Independent Claim 1 is the sole claim presented for consideration.

Initially, Applicant wishes to thank the Examiner for the courtesy extended toward their representative during the personal interview of June 24, 2008. The interview focused primarily on independent Claim 1 and U.S. Patents No. 6,704,693 (Fan) and No. 6,096,088 (Yu).

Claim 1 as shown above has been amended to be in the same form presented at the interview.

Claim 1 currently stands rejected under 35 U.S.C. §103 as allegedly being obvious over Fan in view of Yu. This rejection is respectfully traversed.

As discussed at the interview, Claim 1 relates to a geometric model conversion method of converting a three-dimensional CAD geometric analytical model of a thin-walled structure into a two-dimensional analytical model. The method includes a step of generating a plurality of tetrahedral solid elements each of which has single-layered structure in a plate thickness direction, by dividing an input three-dimensional CAD geometric analytical model which has a thin-walled structure, with a surface and an opposing point of the tetrahedral solid element being in contact with two opposite surfaces of the thin-walled structure, or two sides of the tetrahedral solid element being in contact with two opposite surfaces of the thin-walled structure, and a step of generating intermediate nodes of sides that extend in a direction of plate thickness in each tetrahedral solid element. Additional steps include connecting the intermediate

nodes to generate a plurality of triangular shell elements or rectangular shell elements as the two-dimensional analytical model, and executing an injection molding analysis with respect to each shell element of the two-dimensional analytical model generated in the connecting step and outputting the results of the injection molding analysis.

In accordance with Applicant's claimed invention, a high performance and efficient method for modeling an object is provided. Support for the claim amendments can be found, for example, in Figures 2 and 3 and disclosed, for example, on page 9, line 22, *et. seq.*, of the specification.

In contrast to Applicant's claimed invention, however, the Fan patent is not understood to teach or suggest a geometric model conversion method that includes, among other features, generating a plurality of tetrahedral solid elements, with a surface and an opposing point of the tetrahedral solid element being in contact with two opposite surfaces of a thin-walled structure, or two sides of the tetrahedral solid element being in contact with two opposite surfaces of the thin-walled structure, and connecting intermediate nodes to generate a plurality of triangular shell elements or rectangular shell elements as the two-dimensional analytical model. The Office Action asserts that Fan generates a plurality of tetrahedral solid elements. As discussed during the interview, it is acknowledged that Fan discloses that using tetrahedral solid elements are known, but this teaching is directed to a conventional solid element structural analysis with its own advantages and disadvantages, as discussed in the Background section of the patent (in columns 1 and 2). In this section Fan also discloses a known technique of using

- 4 -

triangular shell elements, which also advantages and disadvantages. Because of the disadvantages associated with such conventional methods, however, <u>Fan</u> uses a structural analysis method that generates a shell element model of <u>pentahedral</u> elements.

The Office Action further relies on Figures 9-11 of <u>Fan</u> for allegedly teaching connecting intermediate nodes of sides that extend in a direction of plate thickness in each tetrahedral solid element to generate a plurality of triangular shell elements or rectangular shell elements. It is respectfully submitted, however, that <u>Fan</u> starts from a solid model and meshes the outer surface using triangular or quadrihedral elements (column 7, lines 50-55). <u>Fan</u> does not teach or suggest the generation of a plurality of tetrahedral <u>solid</u> elements and generating a plurality of triangular <u>shell</u> elements or rectangular shell elements by connecting intermediate nodes in the manner set forth in Applicant's invention.

The secondary citation to <u>Yu</u> relates to a modelling method for three dimensional objects and is relied upon for teaching a single layered structure in the plate thickness direction. <u>Yu</u> fails, however, to compensate for the deficiencies in <u>Fan</u>.

It is respectfully submitted, therefore, that the proposed combination of art, even if proper, still fails to teach or suggest Applicant's invention. Accordingly, reconsideration and withdrawal of the rejection of the claim under 35 U.S.C. §103 is respectfully requested.

In view of the foregoing, reconsideration and allowance of this application is deemed to be in order and such action is respectfully requested.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

/Scott D. Malpede/

Scott D. Malpede
Attorney for Applicant
Registration No. 32,533

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200

SDM\rnm

FCHS_WS 2244479v1